

### **REMARKS**

The Office Action of October 28, 2008, has been reviewed and the Examiner's comments carefully considered. Claims 24-48 and 51 are pending in the application. Claims 49 and 50 are withdrawn and claims 24 and 38 have been amended. Support for these amendments can be found, for example, in the specification on page 4, line 25 to page 5, line 3. Claim 24 is in independent form.

### **Election/Restrictions**

In a telephone conversation with Examiner Bekker on November 14, 2008, Examiner Bekker confirmed that there was a typographical error on page 2 of the Office Action and that, in fact, only claims 49-50 were withdrawn from consideration. Claims 46-48 have been joined with Group I.

### **Oath/Declaration**

Additionally, in the telephone conference with Examiner Bekker on November 14, 2008, Examiner Bekker indicated that the Oath was signed by all of the listed inventors and was therefore not defective.

### **Rejections Under 35 U.S.C. §112, Second Paragraph**

Claims 38-40 and 42 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

In the telephone conference of November 14, 2008 with Examiner Bekker, Examiner Bekker indicated that the removal of the term "minor amount" would be sufficient to overcome this rejection. Therefore, claim 38 has been amended to remove the term "minor amount". Claims 39-40 and 42 depend directly or indirectly from claim 38. Therefore, in view of this claim amendment, claims 38-40 and 42 are now believed to comply with 35 U.S.C. §112, second paragraph.

### **Rejections Under 35 U.S.C. §102(b)**

Claims 24-35, 38-43, 45, 46 and 51 are rejected under 35 U.S.C. §102(b) as being anticipated in view of United States Patent Application No. US 2002/0018839 to Chmiel et al. (hereinafter "Chmiel").

Claim 24 is directed toward a foaming ingredient consisting essentially of one or more proteins forming the wall of vacuoles that comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa.

Chmiel is directed toward an aromatized, soluble creamer powder and does not teach changing or amending any of the other traditional foamer ingredients. This is emphasized in paragraph [0019] of Chmiel, which was cited by the Examiner and reads that “the remaining components of the creamer powder may be standard or conventional.” Chmiel discusses what is meant by traditional foamer ingredients in paragraph [0003] (“creamer powders typically contain protein, fats, and sweeteners”) and further illustrates what is meant by traditional foamer recipes in the examples where copious amounts of carbohydrates are added (i.e, Example I: 24% glucose syrup, 13% sucrose).

Chmiel mentions the use of pressure in solution, with respect to the conventional spray drying step (Chmiel, paragraphs [0028]-[0030]). However, it is important to realize that gas injection at 100 - 400 kPa above the pressure of the homogenized solution of traditional levels of foamer ingredients does not result in gas *entrapped* in vacuoles under pressure. (Chmiel, paragraph [0028]).

Therefore, Applicants assert that Chmiel does not teach the claimed foaming ingredient consisting essentially of one or more proteins forming the wall of vacuoles that comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa.

Because Chmiel does not teach the claimed foaming ingredient consisting essentially of one or more proteins forming the wall of vacuoles that comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa, Chmiel does not anticipate the claimed invention.

Claims 25-35, 38-43, 45, 46 and 51 further limit and depend either directly or indirectly from claim 24. Therefore, claims 25-35, 38-43, 45, 46 and 51 are therefore believed to be patentable for the aforementioned reasons. Removal of the rejections and allowance of claims 24-35, 38-43, 45, 46 and 51 is respectfully requested.

**Rejections Under 35 U.S.C. §103(a)**

**Chmiel in view of Ginnette**

Claims 36 and 37 are rejected under 35 U.S.C §103(a) as allegedly being obvious over Chmiel in view of U.S. Patent No. 2,981,629 to L. F. Ginnette et al. (hereinafter “Ginnette”).

Ginnette is directed toward a process of dehydrating foams and is applied for teaching stabilizers, including monoglycerides that are included from 0.1-5% in order to stabilize a composition (Ginnette column 5, line 46-column 6, line 41).

Applicants assert that the foamer of the claimed invention can be distinguished from the teachings of Chmiel in view of Ginnette, since neither Chmiel nor Ginnette, alone or in combination, teaches or suggests the claimed high concentrations of proteins and optionally plasticizers in the matrix of the claimed foaming ingredient that results in crackless vacuole walls which can keep gas entrapped under a pressure from about 100 kPa to about 20 MPa. Additionally, Applicants assert that a person skilled in the art would not be motivated by Chmiel or Ginnette (or any of the other references) to create the claimed foaming ingredient by amending the traditional matrix of fat, carbohydrate, and protein. Specifically, Applicants assert that one skilled in the art would not be motivated to look to the teachings of Ginnette since the teachings of Ginnette are far removed from the field of foaming ingredients in the context of the claimed invention.

Because neither Chmiel nor Ginnette teaches or suggests a foaming ingredient consisting essentially of one or more proteins forming the wall of vacuoles that comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa, claims 36 and 37 are not obvious over Chmiel in view of Ginnette.

**Chmiel in view of Scinto**

Claims 44 and 47 are rejected under 35 U.S.C §103(a) as allegedly being obvious over Chmiel in view of European Patent Application No. EP 0813815 to Scinto et al. (hereinafter “Scinto”).

Scinto is applied for teaching that foaming creamers are used to simulate the foam on a cappuccino-type beverage and does not amend existing foamer preparation methods (Scinto page 2, lines 9-22; page 3 lines 20-27).

The claimed invention is not taught or suggested by the combination of Chmiel in view of Scinto because neither Chmiel nor Scinto alone or in combination teaches applying pressure on the spray-dried *powder* having essentially crackless vacuoles, such that the pressurized gas cannot escape the vacuoles resulting in vacuoles that comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa. The ability of the vacuoles to comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa results from the high levels of proteins and optional plasticizers that make up the vacuole walls.

Scinto does not teach exerting pressure on the powder, and applies protein levels less than 40% wt (page 2, line 49).

Therefore, the claimed invention (i.e., a foamer having gas entrapped in a matrix under pressure from about 100 kPa to about 20 MPa) results from a combination of high concentrations of proteins in the vacuole walls and the exertion of pressure on the spray-dried powder, which is structurally different from those disclosed in Chmiel and Scinto.

Because neither Chmiel nor Scinto teaches or suggests a foaming ingredient consisting essentially of one or more proteins forming the wall of vacuoles that comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa, claims 44 and 47 are not obvious over Chmiel in view of Scinto.

#### **Chmiel in view of Bisperink**

Claims 44, 47, and 48 are rejected under 35 U.S.C §103(a) as allegedly being obvious over Chmiel in view of European Patent Application No. EP 1074181 to Bisperink et al. (hereinafter "Bisperink").

Bisperink is applied for teaching a foaming creamer for cappuccino and milk shake beverages produced from carbohydrate, protein and entrapped gas. The protein concentrations in the matrix of Bisperink are less than 40% wt (Bisperink, paragraph [0018]).

However, neither Chmiel nor Bisperink either alone or in combination teaches or suggests the invention of claims 44, 47 and 48, specifically a foaming ingredient consisting essentially of one or more proteins forming the wall of vacuoles that comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa. While Bisperink suggests subjecting the foamer particles to pressure to increase gas entrapment, no means are taken to keep the gas entrapped. (Bisperink, paragraph [0020]).

Because neither Chmiel nor Bisperink teaches or suggests a foaming ingredient consisting essentially of one or more proteins forming the wall of vacuoles that comprise entrapped gas at a pressure from about 100 kPa to about 20 MPa, claims 44, 47 and 48 are not obvious over Chmiel in view of Bisperink.

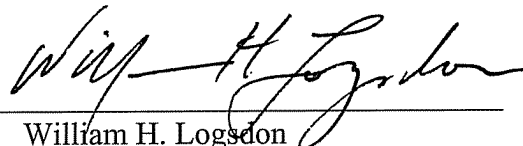
### **CONCLUSION**

Please note that the advantageous foaming properties of the claimed foaming ingredient are demonstrated in Examples 2 and 3 of the present application. In Examples 2 and 3 the claimed foaming ingredient containing pressurized gas vacuoles is compared to a foaming ingredient as disclosed in Bisperink. In terms of foam height and foam volume, the claimed foaming ingredient excels in comparison to the foaming ingredient as disclosed by Bisperink. These examples not only show the advantages of the claimed foaming ingredient, but also give evidence that the claimed foaming ingredient is structurally different from those known in the art.

Based on the foregoing amendments and remarks, reconsideration of the rejections and allowance of pending claims 24-48 and 51 is respectfully requested.

Respectfully submitted,

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